

(1994) 73). These prepolymers are not applied either for further addition polymerisation nor for compositions of root canal sealers.

The compound capable of undergoing polyaddition with the aminoterminated prepolymer (i) is selected from a di- or polyfunctional acrylate, a di- or polyfunctional epoxide, a di- or polyfunctional isocyanate, a di- or polyfunctional isothiocyanate, a di- or polyfunctional acylamide, or a di- or polyfunctional maleimide.

The dental root canal sealing material polymerises by addition polymerisation of amino terminated prepolymers and di- or polyfunctional epoxides, acrylates, acrylamides, maleinimides, isocyanates, thioisocyanates immediately after homogeneous mixing of the compounds.

Due to the application of radio-opaque fillers a radio-opacity of at least 3 mm/mm Al, preferably at least 5 to 7 mm/mm Al, most preferably at least 7 mm/mm Al is provided. As fillers the following compounds are suitable: inorganic fillers such as  $\text{La}_2\text{O}_3$ ,  $\text{ZrO}_2$ ,  $\text{BiPO}_4$ ,  $\text{CaWO}_4$ ,  $\text{BaWO}_4$ ,  $\text{SrF}_2$ ,  $\text{Bi}_2\text{O}_3$ , organic fillers, such as polymer granulate or a combination of organic and/or inorganic fillers.

The dental root canal sealing composition of the invention contains 40 to 85 wt.-% of a filler for providing a minimum radioopacity of the cured composition of at least 3mm/mm Al. The filler contains  $\text{La}_2\text{O}_3$ ,  $\text{ZrO}_2$ ,  $\text{BiPO}_4$ ,  $\text{CaWO}_4$ ,  $\text{BaWO}_4$ ,  $\text{SrF}_2$ ,  $\text{Bi}_2\text{O}_3$ . The radioopacity of the cured composition of the invention is at least 3mm/mm Al, preferably at least 5 to 7 mm/mm Al, and most preferably at least 7 mm/mm Al.

The dental root canal filling material is usable to form prefabricated root canal cones of the same material as applied for the sealing in order to guarantee the compatibility between sealer and cones for a tight sealing.

Preferably, the dental root canal sealing composition of the invention does not contain a diluent, in particular a reactive diluent, having a viscosity which is lower than the viscosity of the prepolymer of the invention. Moreover, the dental root canal sealing composition does not need to contain a polymerisation initiator. In a preferred embodiment, the dental root canal sealing

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